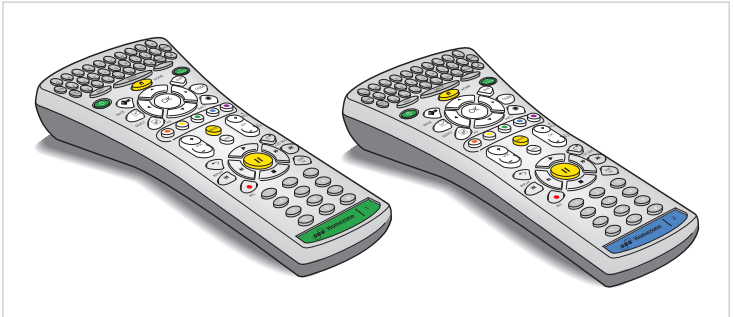


REMOTE CONTROL PROGRAMMING



DISTINGUISHING REMOTE CONTROL 1 AND REMOTE CONTROL 2

The receiver is capable of supporting two simultaneous users and is therefore supplied with two distinct remote controls.

TV1 Remote Control (Green)

The TV1 Remote Control has a green label with a number “1” and will control the nearby television (TV1), which is typically located where the RECEIVER resides. This remote control uses infra-red (IR) signals to control the receiver and your TV1 on-screen experience, and requires unobstructed, line-of-sight use with the receiver.

TV2 Remote Control (Blue)

The TV2 Remote Control has a blue label with a number “2” and will control a second television (TV2), which is connected via coaxial cable to the receiver. This remote uses RF signals, which can travel long distances and go through walls. The TV2 Remote Control is able to control the receiver and your TV2 on-screen experience from anywhere in your home up to 200 feet away.

PAIRING THE TV2 REMOTE CONTROL TO THE RECEIVER

It is necessary to synchronize your TV2 Remote Control with your receiver before use. You're shown how to do this during the on-screen setup process, but the instructions are repeated below.

Using Your TV1 Remote Control:

- Press **HOME** on the remote control to display the home menu.
- Select **System Settings** to go to the System Settings Main Menu.
- Select **Television** to go to the TV Settings menu.
- Select **2nd TV Setup** to go to the TV2 menu.
- Select **Pair TV2 Remote**. The Configure TV2 Remote Control window displays.

Using Your TV2 Remote Control on TV1:

- Simultaneously press and hold **NUMBER PAD 3** and **NUMBER PAD 7** until the LED blinks twice and stays on. Release both keys.
- When complete, the TV2 Remote Control Configured window displays.

Using Your TV1 Remote Control on TV1:

- Press **OK** to continue.

Because RF signals travel long distances and go through walls, a neighbor's remote may control your receiver by mistake. If this is happening, perform the procedure above to re-pair your TV2 Remote Control. Each time, one of 256 codes is randomly selected, so the likelihood of interference with your neighbor is low.

CONFIGURING THE REMOTE CONTROL TO CONTROL A TELEVISION DEVICE, AUDIO DEVICE, OR BOTH

Each remote control is capable of controlling not only the receiver, but also your television and optionally another audio device (i.e., stereo receiver or other media device).

Configuration 1 (television only)

If you use your television to output both video and audio, you should configure your remote control to control your television only. In this configuration, pressing **VOL +**, **VOL -**, **MUTE**, and **TV POWER** on the remote control will control your television's volume up, volume down, mute, and power functions respectively.

To program your remote control for this configuration:

- Simultaneously press the **SHIFT** and **NUMBER PAD 1**.

Configuration 2 (television and audio device)

If you use your television to output video only and another audio device (i.e., stereo receiver or other media device) to output audio, you should configure your remote control to control both your television and audio device. In this configuration, pressing **TV POWER** on the remote control will control your television's power function and pressing **VOL +**, **VOL -**, and **MUTE** will control your audio device's volume up, volume down, and mute functions respectively. Additionally, simultaneously pressing the **KEYBOARD SHIFT** and **TV POWER** will toggle the power of your audio device.

To program your remote control for this configuration:

- Simultaneously press the **SHIFT** and **NUMBER PAD 2**.

PROGRAMMING EACH REMOTE CONTROL TO CONTROL A TELEVISION

To program your remote control to your television:

- Turn on the television device using the device's front panel or its remote control.
- Simultaneously press **NUMBER PAD 1** and **NUMBER PAD 3** to enter television-programming mode.
- After 3 seconds, the LED indicator on top of the remote control will blink twice and stay lit.
- Find the 3-digit Code Number from Table 1 that corresponds to your television's manufacturer. Many manufacturers have several Code Numbers associated with them. Start with the first Code Number.

- Enter the 3-digit Code Number using the lower keypad on the remote control. After each digit key press, the LED indicator will blink.
- If a valid 3-digit Code Number is entered, the LED indicator will blink twice and switch off. The remote control is now programmed with the new Code Number of the television device.
- If an invalid 3-digit Code Number is entered, the LED indicator will give one long blink and switch off. The previously programmed code is retained.
- Try turning off the television device by pressing **TV POWER** on the remote control. If the television device does not turn off, go to step 10.
- Turn the device back on and try **VOL +**, **VOL -**, and **MUTE** to make sure they work. If the Code Number works, stop here.
- If the Code Number does not work, repeat steps 1-9 with the next Code Number in the table.
- If you cannot find a code that works, try 000-156 until the remote control works.

PROGRAMMING EACH REMOTE CONTROL TO CONTROL AN AUDIO DEVICE (CONFIGURATION 2 ONLY)

To program your remote control to your audio device:

- Turn on the audio device using the device's front panel or its remote control.
- Simultaneously press **NUMBER PAD 1** and **NUMBER PAD 6** to enter audio-programming mode.
- After 3 seconds, the LED indicator on top of the remote control will blink twice and stay lit.
- Find the 3-digit Code Number from Table 2 that corresponds to your audio device's manufacturer. Many manufacturers have several Code Numbers associated with them. Start with the first Code Number.
- Enter the 3-digit Code Number using the lower keypad on the remote control. After each digit key press, the LED indicator will blink.
- If a valid 3-digit Code Number is entered, the LED indicator will blink twice and switch off. The remote control is now programmed with the new Code Number of the audio device.
- If an invalid 3-digit Code Number is entered, the LED indicator will give one long blink and switch off. The previously programmed code is retained.
- Try turning off the audio device by pressing **TV POWER** on the remote control. If the audio device does not turn off, go to step 10.
- Turn the device back on and try **VOL +**, **VOL -**, and **MUTE** to make sure they work. If the Code Number works, stop here.
- If the Code Number does not work, repeat steps 1-9 with the next Code Number in the table.
- If you cannot find a code that works, try every code from 000-156 until the remote control works.

TABLE 1 Television Device Code Numbers

A Mark	134	Fujitsu	083
Action	108	Funai	082 083 106 108
Admiral	071 093 099 118	GE	009 066 067 070
	127 130 131		072 073 075 085
Advent	147		086 104 106 110
Aiko	079		113 116 117 125
Aiwa	047		126 127 128 134
			144 149 154 155
Akai	104 105 123	Goldstar	073 074 075 078
Amtron	082		080 092 104 105
Anam	106		109 112 117 134
Anam National	072 082 110		135 137
AOC	073 074 075 104	Gradiente	105 122 123
	112 117 134 140	Granada	134
Apex	000 001 015 016	Grundig	126 134
Audiovox	082 108 140 144	Hallmark	073 075 104
Bell & Howell	071 084 118 131	Harman Kardon	104
Benq	051	Hisense	151
Broksonic	037 038 104 106	Hitachi	041 042 058 059
	118 138 146		068 073 075 078
Carver	153		101 117 126 127
CCE	118		131 134 140 145
Centurion	077	Infinity	087 153
Citek	143	Inovision	009 076 144
Citizen	073 075 079 082	Janel	094
	089 092 138	JBL	087 153
Classic	104 123	JC Penney	070 073 074 075
Colortyme	073 075 105 116		085 086 089 092
	118 125 127 139		104 112 113 125
Contec Cony	106 108		126 127 134 149
Contec/Cony	078 082		155
Craig	082 106 108 114	Jensen	073 075 105 129
	119 125 138	JVC	007 010 012 031
Crosley	118 153		036 078 086 103
Crown	082 087 119 134	Kawasho	073 075 112 123
CTX	056	Kenwood	073 075 080 104
Curtis	104		105 112 116 139
Curtis Mathes	070 073 075 084	Kloss	082 094 110
	089 092 102 105	Novabeam	
	112 117 118 125		
	127 134 135 148		
	153 155		
Daewoo	073 074 075 079	LG	074
	092 104 110 112	Lloyds	137 139
	117 134 135 140	Loewe	087
	144	Logik	071 142
Dalian	006 014 016 136	Luxman	073 075
Daytron	073 075 092 114	LXI	070 075 084 087
	117 134 140		104 118 127 149
			153 155
Denon	145	Magnasonic	104 105 131 140
Dimensia	070 155	Magnavox	017 073 075 080
Dumont	073 091		087 104 105 112
Electrohome	072 073 075 080		114 117 118 119
	104 105 117 134		126 131 153
	144		
Emerson	073 075 078 081	Majestic	071
	082 083 084 092	Marantz	073 075 087 105
	096 103 104 105		112 116 117 118
	106 108 114 117		153
	119 125 129 130	Megatron	075
	131 134 139 144	Memorex	071 074 075 084
	146		104
Envision	073 075 105 112	MGA	073 074 075 080
Fisher	052 084 115 123		105
	124 133	Mitsubishi	049 073 074 075
			080 104 105 112
			117 134

Montgomery Ward	071	Sanyo	073 084 115 124
Motorola	072 093	Sasho	020 036
MTC	073 074 075 089	Scott	073 075 078 082
	104 112 118 125		083 106 108 117
	140	Sears	130 134
Multitech	082		070 073 075 080
Multivision	088		083 084 095 104
NAD	075 101		106 115 118 124
NEC	072 073 074 075		127 133 134 149
	105 112 116 117		153 155
	139	Sharp	013 028 035 073
Nikko	075 079 140		075 078 092 093
Noblex	137		120 131 132 134
Onwa	082 106		139 141
Optimus	101	Signature	071
Optonica	093	Signature 2000	115 132
Orion	096 130 146	Sony	002 018 026 098
Panasonic	003 011 023 032		100 121 123 134
	033 034 072 086	Soundesign	073 075 082 083
	087 108 110 113		104 106 117 119
	126 127 128 140		129
Philco	072 073 074 075	Starlite	082
	078 080 087 104	Supre-Macy	094
	105 112 114 117	Sylvania	044 046 069 073
	118 119 131 140		075 080 087 104
	145 153		105 112 114 117
Philips	004 005 029 030		181 119 140 153
	072 073 078 080	Symphonic	081 082 095 108
	087 118 153	Tandy	093 118
Pioneer	045 073 075 101	Tatung	072 110 138
	110 111 116 117	Technics	086 126 128
Portland	073 074 075 079	Techwood	073 075 086 105
	092 104 112 117		118
	134 135	Teknika	071 073 074 075
Price Club	089		078 079 082 083
Prima	135 142 152		089 092 106 108
Prism	086		112 116 117 119
Proscan	070 127 149 154		134 137 140 143
155			153
Proton	073 075 078 104	Telecaption	090
	105 117 119 127	Telefunken	139
	134 138	Toshiba	006 019 021 024
Quasar	053 063 064 072		025 027 084 089
	086 110 114 126		090 115 125 133
	128		150
Radio Shack	084 106 108 110	ToteVision	092 127
	118 120 124 127	Ultra	140
	132 134 155	Uniden	121
Radio Shack/Realistic	070 073 075 078	Universal	085
RCA	082 084 092	Video Concepts	106
	008 060 065 070	Vidikron	118 153
	072 073 074 075	Vistek	040 048
	080 102 106 110	Wards	070 071 073 074
	111 113 116 117		075 080 081 083
	125 127 128 134		085 087 104 112
	148 149 154 155		113 117 118 119
Realistic	084 155		120 125 127 131
Replay	156		153 155
Runco	091	Walmart	055 051 107
Sampo	039 073 075 092	White	104 112 134 135
	110 112 117	Westinghouse	140 144
Samsung	043 048 054 057	Yamaha	073 074 075 080
	062 073 074 075		112 119 139 140
	078 080 089 092	Zenith	050 055 061 071
	097 104 112 117		073 091 109 121
	118 125 131 134		140
	139		
Sansui	022 096 120		

TABLE 2 Audio Device Code Numbers

Amplifier		Receiver/Amplifier	
Kenwood	048	Yamaha	001
Pioneer	041	Receiver/Tuner	
RCA	069	Aiwa	017 036 039
Yamaha	001 053	BOSE	010
Audio Cassette		Cambridge	011 028
Aiwa	039	Carver	051
Curtis Mathes	041	Curtis Mathes	041
Denon	052	Denon	006 026 027
Fisher	042 049		052
GE	070	Fisher	042 044 049
Kenwood	048 056	Gradiente	062
NAD	040	Harman Kardon	008 038 046
Nakamichi	054	Hitachi	059
Onkyo	055	Ibiza	006 037
Optimus	041 047	JBL	038
Panasonic	015 050	Jensen	061
Philips	013	JVC	007 030
Pioneer	018 041 045	Kenwood	005 028 048
Proscan	070		056
Quasar	050	Luxman	064
Radio Shack	047	Marantz	019
RCA	070	McIntosh	058
Sansui	057	NAD	040
Sanyo	044	Nakamichi	054
Sherwood	047	NEC	040
Sony	043	Nikko	063
Technics	050	Onkyo	003 021 055
Yamaha	053	Optimus	041 047
Audio System		Panasonic	009 012 016
			029 050
Aiwa	039	Philips	014
Carver	051	Pioneer	004 023 041
Curtis Mathes	041		045
Denon	052	Quasar	050
Harman Kardon	046	Radio Shack	047
Jerrold	066 068	RCA	071 072
Kenwood	048 056	Sansui	057
Nakamichi	054	Sanyo	042 044
Panasonic	015 016	Sharp	060
Philips	013 014	Sherwood	047
Pioneer	018 041	Sony	000 024 043
RCA & Dimensia	031 032 033	Technics	002 020 050
Sansui	034 035	Toshiba	025
Sanyo	057	Yamaha	048 053
Sony	044	Zenith	065
Scientific Atlanta	067	Philips	022
Sony	043	TV/VCR/Tuner Combo	
Starcom	066	Panasonic	012
Technics	050		
Yamaha	053		
Digital Audio Tape			
Sony	043		
HTIB			
BOSE	010		
Philips	022		
Toshiba	025		
Phono			
Kenwood	048		
Pioneer	041		
Sony	043		
Yamaha	053		

REGULATORY INFORMATION

Trade Name: MRC3020RF
Responsible Party: 2Wire, Inc.
Address: 1704 Automation Pkwy.
San Jose, CA 95131 408-856-1600

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must acceptn ay interference received, includingin terference that may cause undesired operation.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

